

Claims:

What is claimed is:

5 1. A system for session-based retrieval at a client system of content from a server system, said server system serving a string-based content, said string-based content including a plurality of strings, comprising:

 a communication protocol that provides a session-based connection between a client system and a server system, and allows said client system to query said server system for content;

10 a client object, in communication with a client software at said client system, said client object capable of transmitting to a server object a plurality of queries to retrieve content from said content engine, wherein each of said plurality of queries comprises a single string character, and wherein each subsequent of said plurality of queries extends the query; and,

15 a server object, in communication with a server software at said server system, said server object furthermore in communication with said client object via said communication protocol, said server object records each of said plurality of queries, and in response to each of said queries returns increasingly appropriate content information to the client object as the query is being extended.

20 2. The system of claim 1 wherein said client software operates on or at a first computer and said server software operates on or at a second computer, and wherein both of said first and said second computers are connected via a communication network protocol.

25 3. The system of claim 1 wherein said server software and said client software runs on the same computer.

4. The system of claim 1 wherein said server software runs on a plurality of separate computers, and wherein said client queries are distributed over said separate servers.

5. The system of claim 1 wherein said server software stores previously used strings and returns said stored strings to the client in response to new client queries, without accessing said content engine.

6. The system of claim 1 wherein said client software is embedded into a software application that provides a visual interface to an operator.

7. The system of claim 1 wherein said client software is used as a content engine for another software system.

8. The system of claim 1 wherein said client software accumulates a plurality of said single character queries as they are entered into the client, before sending them together to said server software as a string.

9. The system of claim 1 wherein said client software stores previously received responses and uses these as the response to a new query by the user, without re-accessing the server.

10. The system of claim 1 wherein said client software stores a pre-defined string and automatically transmits it to the server as the client software is first accessed, and wherein additional entry of query characters is not required before server responses are sent to the client.

11. The system of claim 1 wherein said server software stores the state of query and response of the client software, and restores the state of the client software after any interruption in said communication protocol.

5 12. The system of claim 1 where said client software adds a qualifier to the query that is passed to the content engine by the server, whereby the content engine can use said qualifier to execute the query and return appropriate results based on both the query string and its qualifier.

10 13. The system of claim 1 where said client software identifies a user of the system to the server software whereby the server can store statistics and provides a history of queries and corresponding responses appropriate to said user.

15 14. The system of claim 1 where said server software is distributed within a server tier and a syndication tier, and wherein said client software communicates to the server tier on a single computer, and wherein each query is forwarded by the server tier to an appropriate syndicate of content channels connected to the server tier on a different computer.

20 15. The system of claim 1 where said server software applies a content engine dependent pattern and filter to characters received from the client before queries are transmitted to the content engine.

25 16. The system of claim 15 wherein the number of queries transmitted to the content engine is limited.

17. The system of claim 1 where server responses comprise lists of strings, wherein each string is accompanied by corresponding metadata, whereby the metadata contains logical links to other data sources or Uniform Resource Identifiers.

5 18. The system of claim 16 where each string in the server response list is a link to another data source or a Uniform Resource Identifier.

19. A system for retrieval of content in a distributed client-server system, comprising:

10 a content engine, for providing string-based content;

a session protocol, for providing a session-based connection between a client system and a server system;

15 a client object, at said client system, for transmitting to said server system a successive plurality of queries to retrieve content from said content engine, wherein a first of said plurality of queries initially comprises a single character, and wherein each successive query thereafter extends the query; and,

20 a server object, at said server system, in communication with said client object via said session protocol, for recording each of said plurality of single character queries, and in response to each successive query returns increasingly content to the client object appropriate to the extended query.

20. A system for session-based retrieval of content from a string-based content engine system, comprising:

25 a user interface, for inputting a plurality of queries to a client object, for subsequent transmission of said plurality of queries to a remote server object, wherein said remote server object is in communication with said content engine, wherein further each of said plurality of queries comprises a single string character;

a session protocol manager that maintains a session between said client object and said server object;

a client object, in communication with said user interface, for transmitting to said remote server object, during a session, a subset of said plurality of queries, and for receiving from said server object, content information appropriate to said session and to said subset of queries; and,

an input status mechanism for visually indicating the status of said content information appropriate to said session.

21. A system for session-based delivery of content from a string-based content engine to a client, comprising:

a server, for receiving a request for content from a client object at said client, said request comprising a plurality of single string character queries;

a session protocol manager that maintains a session between said client object and said server object; and,

a server object in communication with said server, for providing content information appropriate to said session, said server object records each of said plurality of single character queries, and in response to each of said queries returns increasingly appropriate content information to the client as the query is being extended.

22. A system for session-based retrieval at a client system of a string-based content from a server system, comprising:

a content engine, for serving a string-based content, said string-based content including a plurality of strings;

a communication protocol that provides a session-based connection between a client system and a server system, and allows said client system to query said content engine;

a client object, in communication with a client software application, said client object capable of transmitting to a server object a plurality of queries to retrieve content from said content engine, wherein each of said plurality of queries comprises a single string character, and wherein each subsequent of said plurality of queries extends the query; and,

a server object in communication with said client object via a communication protocol, said server object records each of said plurality of single character queries, and in response to each of said queries returns increasingly appropriate content information to the client object as the query is being extended.

23. A system for session-based retrieval at a client system of a string-based content from a server system, comprising:

a content engine, for serving a string-based content, said string-based content including a plurality of strings;

a communication protocol that provides a session-based connection between a client system and a server system, and allows said client system to query said content engine;

a client object, in asynchronous communication with a client software application, said client object capable of continuously transmitting to a server object a plurality of queries to retrieve content from said content engine, wherein each of said plurality of queries comprises a single string character, and wherein each subsequent of said plurality of queries extends the query; and,

a server object, in asynchronous communication with said client object via said communication protocol, said server object continuously records each of said plurality of single character queries, and in response to each of said queries returns increasingly appropriate content information to the client object as the query is being extended.

24. A user interface mechanism, for use with a client application of a session-based content retrieval system, said user interface mechanism indicating both the availability of a session between said client application and a remote content server, and the status of said session, said mechanism comprising:

5 a user interface element, in communication with said client application, said user interface element allows a user to input data for transmission to a remote content server;

a session indicator, said session indicator displayed within a first portion of said user interface element, for indicating the presence of a session between said client application and said content server; and,

10 a status indicator, said status indicator displayed within a second portion of said user interface element, for indicating the status of available content at said content server for selection by said user at said user interface element.

15 25. The mechanism of claim 24, wherein said user interface element is an application input field.

20 26. The mechanism of claim 24, wherein said session indicator displays a triangular display element to indicate the presence of said session, and does not display said triangular display element to indicate the absence of said session.

25 27. The mechanism of claim 24, wherein said status indicator displays one, or a plurality of, arrow display elements to indicate the transfer of data from said client application to said server during said session, and the presence of available session-specific content at said server.